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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,162	08/28/2003	Isao Sakurai	6667/28	7065
757 7590 04/26/2007 BRINKS HOFER GILSON & LIONE P.O. BOX 10395 CHICAGO, IL 60610			EXAMINER NORDMEYER, PATRICIA L	
			ART UNIT 1772	PAPER NUMBER

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/26/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/650,162	SAKURAI ET AL.
<b>Examiner</b>	<b>Art Unit</b>	
Patricia L. Nordmeyer	1772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### **Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 01 March 2007.

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## **Disposition of Claims**

4)  Claim(s) 1,3-13,15-18,20,21 and 23-26 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) 1,3-13,15-18,20,21 and 23-26 is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)  The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All    b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3.  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4)  Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5)  Notice of Informal Patent Application  
6)  Other: \_\_\_\_\_.  
\_\_\_\_\_

**DETAILED ACTION*****Withdrawn Rejections***

1. The 35 U.S.C. 102(e) rejection of claims 1, 3 – 5, 8, 10, 11, 16 – 18, 20 and 21 as anticipated by Hennen (USPN 6,982,107) in the office action dated October 30, 2006 is being withdrawn due to Applicant’s amendments in the response dated March 1, 2007.
2. The 35 U.S.C. 102(e) rejection of claims 6, 7, 9, 12, 13, 15 and 22 over Hennen (USPN 6,982,107) in view of Shikinami et al. (USPN 4,855,077) in the office action dated October 30, 2006 is being withdrawn due to Applicant’s amendments in the response dated March 1, 2007.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
4. Claims 1, 3 – 5, 8, 10, 11, 16 – 18, 20, 21 and 23 – 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hennen (USPN 6,982,107) in view of Matsuura et al. (USPN 5,906,704).

Hennen discloses a pressure sensitive adhesive article (Column 1, lines 7 – 8) comprising a pressure sensitive adhesive layer (Column 8, line 12) mainly formed of polyurethane resin

(Column 8, line 16) and free of silicone compound in an amount of 500 g/m<sup>2</sup> or less (Column 8, lines 12 – 57) and a releasing agent layer mainly formed of polyolefin resin (Column 3, lines 60 – 65) selected from polyethylene, polypropylene, ethylene  $\alpha$  copolymers, olefin based thermoplastic elastomer and mixtures thereof (Column 3, lines 25 – 45; Column 6, lines 15 – 23) having a density equal to or less than 0.94 g/cm<sup>3</sup> (Column 5, lines 62 – 67), which inherently has a numerical average molecular weight of about 15,000 to about 500,000 determined by GPC based on the composition, adhered to the pressure sensitive adhesive layer (Column 3, lines 12 – 13), wherein the releasing agent layer that faces the pressure sensitive adhesive layer has a tension of almost zero, thereby being less than 22mN/m (Column 7, lines 26 – 46) as in claims 1 – 3, 5, 11 and 16. With regard to claims 4 and 8, the pressure sensitive adhesive sheet includes a base material of plastic film on which the pressure sensitive adhesive is provided (Column 3, lines 25 – 27), and the release sheet includes a release sheet base material on which the releasing agent layer is provided (Column 4, lines 65 to Column 5, line 1; Column 6, lines 42 – 46), the release sheet being removable attached to the pressure sensitive adhesive layer of the pressure sensitive adhesive sheet through the releasing agent layer thereof (Column 7, lines 26 – 46). As in claim 10, the pressure sensitive adhesive article is a tape (Column 8, lines 67 to Column 9, line 1), which comprises a base material having both surfaces with a pressure sensitive adhesive on side and a releasing agent layer on the other being would into a roll form until it is used (Column 9, lines 1 – 3; Column 7, lines 56 – 67). The polyolefin resin is selected from the group consisting of a polyethylene resin whose density is 0.9 to 0.922 g/m<sup>2</sup> (Column 5, lines 62 – 67) and an olefin based thermoplastic elastomer whose density is 0.86 to 0.88 g/m<sup>2</sup> (Column 6, lines 21 – 23), wherein the thermoplastic elastomer is an ethylene-octene copolymer (Column 6, lines

15 – 21) as in claims 17 and 18. With regards to claims 20 and 21, an adhesion enhancing layer is provided between the release sheet base material and the release agent layer, wherein the release sheet base material is a plastic film (Column 3, lines 25 – 27) and the adhesion enhancing layer is made of polyethylene resin (Column 4, lines 53 – 60). However, Hennen fails to disclose the polyurethane resin being obtained by reacting polyol and polyisocyanate, the polyol comprising at least one of polyester polyol and polyether polyol, and the polyisocyanate comprising at least one of aromatic polyisocyanate, aliphatic polyisocyanate, aromatic-aliphatic polyisocyanate and alicyclic polyisocyanate, and wherein the amount of the polyisocyanate to be compounded with respect to 100 parts by weight of the polyol is in the range of 1 to 30 parts by weight, the polyol being polyether polyol, the polyisocyanate being alicyclic polyisocyanate and the polyurethane being polyurethane-urea.

Matsuura et al. teach a the polyurethane resin being obtained by reacting polyol and polyisocyanate, the polyol comprising a polyether polyol (Column 3, lines 16 – 21), and the polyisocyanate comprising alicyclic polyisocyanate (Column 7, lines 27 – 33), and wherein the amount of the polyisocyanate to be compounded with respect to 100 parts by weight of the polyol is in the range of 1 to 30 parts by weight (Column 2, lines 27 – 29) and the polyurethane being polyurethane-urea (Column 2, lines 32 – 36) for the purpose of forming an adhesive that has good flexibility and adhesiveness (Column 1, lines 10 – 11).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the polyurethane resin being obtained by reacting polyol

and polyisocyanate in Hennen in order to form an adhesive that has good flexibility and adhesiveness as taught by Matsuura et al.

With regard to the release agent having a numerical average molecular weight of about 15,000 to about 500,000 determined by GPC based on the composition, it is inherent that the polyolefin resin of Hennen would meet the numerical average molecular weight as claimed since the releasing agent is selected from polyethylene, polypropylene, ethylene  $\alpha$  copolymers, olefin based thermoplastic elastomers and mixtures thereof (Column 3, lines 25 – 45; Column 6, lines 15 – 23) having a density equal to or less than 0.94 g/cm<sup>3</sup> (Column 5, lines 62 – 67), which overlaps the Applicant's claimed characteristics of the releasing agent layer as shown by the limitations presented by claim 17. Therefore, it would be inherent that the polyolefin resins of the release agent of Hennen would have a numerical average molecular weight of about 15,000 to about 500,000 determined by GPC based on the composition.

5. Claims 6, 7, 9, 12, 13, 15 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hennen (USPN 6,982,107) in view of Matsuura et al. (USPN 5,906,704) as applied to claims 1, 3 – 5, 8, 10, 11, 16 – 18, 20, 21 and 23 – 26 above, and further in view of Shikinami et al. (USPN 4,855,077).

Hennen, as modified with Matsuura et al., discloses a pressure sensitive adhesive article (Column 1, lines 7 – 8) comprising a pressure sensitive adhesive layer (Column 8, line 12) mainly formed of polyurethane resin (Column 8, line 16) and free of silicone compound in an

amount of 500 g/m<sup>2</sup> or less (Column 8, lines 12 – 57) and a releasing agent layer mainly formed of polyolefin resin (Column 3, lines 60 – 65) selected from polyethylene, polypropylene, ethylene  $\alpha$  copolymers, olefin based thermoplastic elastomer and mixtures thereof (Column 3, lines 25 – 45; Column 6, lines 15 – 23) having a density equal to or less than 0.94 g/cm<sup>3</sup> (Column 5, lines 62 – 67), which inherently has a numerical average molecular weight of about 15,000 to about 500,000 determined by GPC based on the composition, adhered to the pressure sensitive adhesive layer (Column 3, lines 12 – 13), wherein the releasing agent layer that faces the pressure sensitive adhesive layer has a tension of almost zero, thereby being less than 22mN/m (Column 7, lines 26 – 46). However, the modified Hennen fails to disclose the amount of the gas generated from the pressure sensitive adhesive sheet is equal to or less than 20 mg/m<sup>2</sup>, the pressure sensitive adhesive sheet contains ions from a select group in an amount equal to or less than 20 mg/m<sup>2</sup>, an antistatic layer provided on one or both of the surfaces of the base material and the polyurethane rein comprises a resin obtained by reacting a polyol and a polyisocyanate.

Shikinami et al. teach an antistatic layer provided on one or both of the surfaces of the base material (Column 4, lines 62 – 64) in combination with ions from a select group in an amount equal to or less than 20 mg/m<sup>2</sup> (Column 13, lines 10 – 26) in a pressure sensitive adhesive article, wherein the article is a pressure sensitive adhesive tape which comprises a base material having both surfaces, the pressure sensitive adhesive layer provided on one of the surfaces of the base material and the releasing agent layer provided on the other surface of the base material, wherein the pressure sensitive adhesive tape being wound in a roll form until it is used (Column 4, lines 57 – 58) for the purpose of using the adhesive material as a sticking agent

for sticking tapes having an antistatic sticking layer in the fields of industry, agriculture, packaging and electronics (Column 1, lines 30 – 33).

It would have been obvious to one of ordinary skill in the art at the time the applicant's invention was made to have provided the ions from the select group and an antistatic layer in the modified Hennen in order to have a adhesive material as a sticking agent for sticking tapes having an antistatic sticking layer in the fields of industry, agriculture, packaging and electronics as taught by Shikinami et al.

In regards to the limitations of a wet tension test defined by JIS K 6768, the amount of the gas generated from the pressure sensitive adhesive sheet is equal to or less than 20 mg/m<sup>2</sup> in claims 1 – 3, 6, 12 and 15, one of ordinary skill in the art would have recognized the claimed pressure sensitive article would have a wet tension test defined by JIS K 6768, the amount of the gas generated from the pressure sensitive adhesive sheet is equal to or less than 20 mg/m<sup>2</sup> since Hennen teaches a pressure sensitive article having the same parameters as the claimed invention. Therefore, one of ordinary skill in the art would readily determine the tension, density and amount of gas generated depending on the end desired results in the absence of unexpected results.

#### *Response to Arguments*

6. Applicant's arguments with respect to claims 1, 3 – 13, 15 – 18, 20, 21 and 23 - 26 have been considered but are moot in view of the new ground(s) of rejection.

In response to Applicant's argument that neither Hennen nor Shikinami et al. disclose the polyurethane resin being obtained by reacting polyol and polyisocyanate, the polyol comprising at least one of polyester polyol and polyether polyol, and the polyisocyanate comprising at least one of aromatic polyisocyanate, aliphatic polyisocyanate, aromatic-aliphatic polyisocyanate and alicyclic polyisocyanate, and wherein the amount of the polyisocyanate to be compounded with respect to 100 parts by weight of the polyol is in the range of 1 to 30 parts by weight, the polyol being polyether polyol, the polyisocyanate being alicyclic polyisocyanate and the polyurethane being polyurethane-urea, please see the newly presented rejection above in view of Matsuura et al.

### *Conclusion*

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Nordmeyer whose telephone number is (571) 272-1496. The examiner can normally be reached on Mon.-Thurs. from 10:00-7:30 & alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on (571) 272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patricia L. Nordmeyer  
Examiner  
Art Unit 1772

*pln*  
pln

*Nasser Ahmad* 4/24/07  
NASSER AHMAD  
PRIMARY EXAMINER